

# **EXHIBIT E**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application for : Date: September 18, 1990  
Greenspan and Low : Group: Art Unit 152  
Patent No.: 07/413,395 : Examiner: J. Spear  
Filed: September 27, 1989 : Action: AMENDMENT  
For: CLEANING COMPOSITIONS WITH :  
ORANGE OIL : 15c

TO: The Commissioner of Patents and Trademark Office  
Washington, DC 20231

Sir:

In response to the Office Action of 18 June 1990, please  
reconsider the claims of this application in view of the  
following remarks:

REMARKS

These remarks are in response to the Office Action of 18  
June 1990 in the above referenced patent application. In that  
application, Claims 1-18 were pending. However, Claims 16-18  
were deemed withdrawn from consideration despite Applicants'  
traverse of the election.

Of the remaining claims, Claim 1 was rejected over Coleman,  
The Citrus Industry Publication, November 1975 under 35 U.S.C.  
Section 103. Claim 2 was rejected over Coleman in further view  
of U.S. Patent No. 4,620,937 to Dellutri under 35 U.S.C. Section  
103. Claims 3-7 and 9-15 were rejected over Coleman and Dellutri  
in further view of U.S. 4,014,995 to Juliano. Claim 8 was  
rejected over the Coleman reference in view of Dellutri and  
Juliano and in further view of U.S. Patent No. 4,553,487 to  
Jones.

At the outset, Applicants note with appreciation the thoroughness of the Examiner's comments in applying the cited references against the claims. However, Applicants have not amended their claims since they believe that the references teach away from the present invention, as currently claimed, so that all of the claims in this application are allowable over these references. Applicants' position is supported by two arguments.

First, as the Examiner has noted, none of the cited references disclose the use of orange oil as a primary constituent. Rather, each of the references rely on the cleaning properties of d-limonene as the primary cleaning constituent. The Examiner then concludes that it would be obvious to substitute orange oil for the d-limonene since the d-limonene is distilled from a citrus oil.

Simply put, these references do not suggest the use of orange oil alone, but rather teach away from the use of orange oil since they rely on the distillate d-limonene. Applicants have found that undistilled orange oil has higher cleaning properties when used in a composition than distilled d-limonene. Applicants have tested the compositions produced according to the ranges of the present application wherein an equal weight percent of d-limonene was substituted for the orange oil. In each case, the orange oil based composition had superior cleaning properties than the identical composition with an equivalent amount of d-limonene substituted for the orange oil. While Applicants believe that other esters and volatiles in the orange oil may contribute to the enhanced cleaning properties, although the

exact reason for the enhanced cleaning properties has not yet been determined. Nonetheless, Applicants have learned of a surprising result from the raw orange oil in these enhanced cleaning properties. This distinction over the use of d-limonene in the prior art is significant and not at all obvious. Indeed, Applicants have found that their composition is effective on substances such as urethane caulking, paint and tar that resist d-limonene cleaning compositions.

The enhanced cleaning property of orange oil contributes to the second distinction between the compositions recited in this application and the prior art. A review of the prior art shows that d-limonene is used in weight percentage ratios that are above the lower ratios claimed in the present application. These ratios run from a low of 51% d-limonene (Coleman) to a high of approximately 70% d-limonene (Coleman). Dellutri uses approximately 58%-60% d-limonene. As noted in the Coleman reference, citrus oil contains approximately 94% d-limonene so that the equivalent amount of citrus oil necessary to provide the amount of d-limonene in the prior art compositions run from approximately 55%-75%.

Claim 1 of the present application claims a range of 5% to 60% orange oil which, as noted above, allows for greater cleaning ability for lesser of the included cleaning agent (orange oil). Since the expense of orange oil is fairly substantial, this surprising result allows a reduction in the proportion of orange oil as opposed to d-limonene, and this leads to substantial economies.

A derivative benefit is seen where the quantity of orange oil, (and thus the amount of d-limonene) since studies have indicated that d-limonene may have carcinogenic effects. For example, the attached study taken from the National Toxicology Study Program (January 1990) indicates a possible adverse effect from excess d-limonene. Where a cleaning composition is intended as one suitable for hand cleaning, as is the present invention, the benefits from reducing the quantity of d-limonene while maintaining the cleaning ability may be appreciated without further explanation.

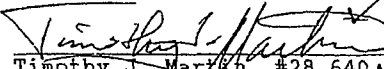
Accordingly, all of the claims in this application are believed allowable for the inclusion of orange oil. However, several points directed to the dependent claims are in order since it is believed that the dependent claims contain allowable subject matter in their own right. In particular, those claims including the use of oat-grain derivatives and oatmeal. Here, it has been found that the oatmeal may lend cleaning properties in that oatmeal acts as a drawing agent to help remove certain oils or other materials from the surface to be cleaned. It also adds an abrasive quality to the cleaning compound to enhance the scrubbing ability.

Based on the foregoing, it is believed that this application is conditioned for allowance and action to that end is courteously solicited. Should the Examiner request any further information, in the form of affidavits or otherwise, regarding the matters addressed in this Amendment, the Examiner is invited to contact attorney for the Applicants at the telephone number

listed below. Applicants would specifically request the opportunity to submit such affidavits in the event that the Examiner maintains the rejection of the present application.

Respectfully submitted,

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CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8

✓ I hereby certify that the foregoing AMENDMENT is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to The Commissioner of Patents and Trademarks, Washington, DC 20231, on this 18th day of September, 1990.

